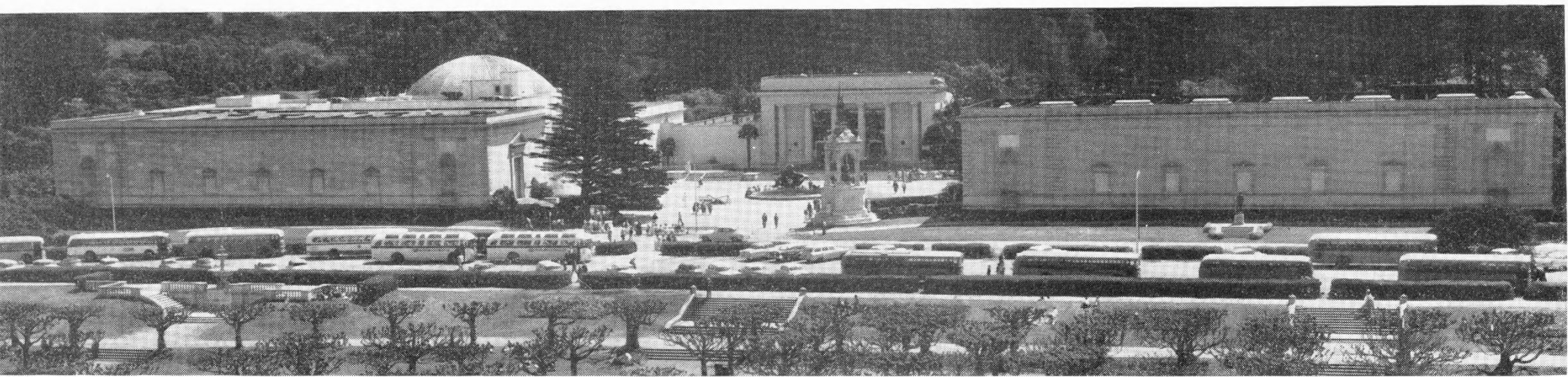


ANNUAL
REPORT
1962



CALIFORNIA
ACADEMY
OF SCIENCES



TO THE MEMBERS AND FRIENDS OF THE CALIFORNIA ACADEMY OF SCIENCES

Continued and substantial progress was achieved during the 109th year of the California Academy of Sciences towards solving its most pressing problem of recent years—finances. The Academy's particular thanks go to the Mayor and the members of the Board of Supervisors of the City and County of San Francisco for the leadership they showed in obtaining approval as provided for in the City's Charter for those expenses incurred in connection with public museum activities of the Academy. For the fiscal year ending June 30, 1963, the Supervisors have appropriated \$140,682 in full support of these activities as well as an additional \$92,150 for long overdue building repairs.

It bears repeating once more that it is the expressed policy of the Trustees to provide for the operation of the Academy's scientific departments and other scientific activities out of income received from its endowment, from membership dues, special grants, and other private sources. No monies for these purposes have *ever* been received from the City, nor will they be sought from the City under this restated policy.

In this respect, our thanks again go to the Academy's many friends who once more responded generously to this past year's appeal. It can now be stated that with City support of public service activities at its current level, the immediate financial crisis in its more acute form is approaching solution.

The Academy's budget for the current fiscal year amounts to \$998,049 and includes an approved anticipated deficit of about \$23,000. The fact that a deficit budget has been so authorized by the Trustees highlights the continuing need for financial support from the Academy's corporate and individual members and friends. This is even more apparent when it is realized that for many years now, the scientific activities have been operating under a true austerity program—too austere for health from every viewpoint. Supporting expenses of all kinds have been pared

to the bone. The Academy has no retirement program. The 1962-63 budget provides for the first general salary increase in almost four years; even with this increase, salaries are in the bottom range as compared with those paid by leading educational and scientific institutions in the Bay Area. They are inadequate to attract qualified replacement personnel. If the Academy is to maintain its position of high respect in the scientific world and to attract competent personnel, this must be corrected.

That is the challenge now—to its members and friends. With the initial financial crisis near a solution and the City of San Francisco having appropriated monies to pay for the operation of the public service activities, the Trustees now turn to the community—to members, to corporations, to foundations, and to new friends for regular, year-after-year support of this important community enterprise. The report of the Director that follows will surely confirm the extent of worthwhile accomplishments of the Academy and by its loyal and competent staff even under the stringent limitations imposed by the financial emergency.

Last December, Mr. E. Morris Cox was elected to fill the vacancy on the Board of Trustees created by the previously reported death of Colonel George Stimmel. The Academy is fortunate to have the services of Mr. Cox, who brings to the Board the benefit of his extensive experience in many community public service activities.

Respectfully submitted,

DECKER G. McALLISTER

San Francisco, California
September 7, 1962

Cover photo: Even the glass roof of Steinhart Aquarium's central court is being renovated.

REPORT OF THE DIRECTOR

The earliest museum of which we have any record was that of Alexandria. Remarkably enough, this first museum was one of the greatest. The city was founded by Alexander the Great in 332 B.C., at the time when the influence of Greece was predominant through the Mediterranean world; and Alexander was buried there after his untimely death at the age of thirty-three. The museum was founded about 306 B.C. by Ptolemy Soter, who, we are told, "began to draw around him . . . a circle of men eminent in literature and philosophy. To these he gave every facility for the prosecution of their learned researches . . . (He) laid the foundations of the great Alexandrian library. He also built, for the convenience of his men of letters, the museum, which was in many respects not unlike a modern university." Ptolemy Philadelphus, who succeeded Ptolemy Soter, added to the library by the purchase of the library of Aristotle, tutor of Alexander, and the greatest naturalist of the ancient world.

This famous museum of antiquity survived almost a thousand years—longer than any contemporary museum has had an opportunity to do. It was finally destroyed in one of the vicissitudes of war, which have plagued both ancient and modern civilizations.

Its significance for us is that the museum idea—as conceived and developed in Greek and subsequently Roman times—combined the functions of a library, a research center, and a repository of objects deemed worthy of preservation and study. These remain as the functions of all important museums. They have been the objectives of the California Academy of Sciences throughout the 109 years of its existence, and they are its objectives today, together with the further function of public education in the sciences. It has truly been said, "A museum is a university of the people."

ATTENDANCE

The degree to which the people have utilized this university—which offers few courses and no degrees, but which is open to students and visitors 365 days a year—is indicated by the attendance, which ranks with that of the largest museums in the world. The figures are:

North American Hall	517,289
Hall of Science	822,859
Steinhart Aquarium	928,804
Total	2,268,952

Of this number 86,799 came in organized groups, usually school and college classes under the guidance of their teachers. This does not include the Planetarium attendance, which is given elsewhere in this report.

MEMBERSHIP

Membership in the Academy has shown a modest but gratifying increase in 1961-62. On the basis on which membership has previously been reported, the number of members on June 30, 1962, was 3,233 compared with a membership of 2,937 on June 30, 1961. In addition the Trustees decided during the past year to extend the privilege of Associate Membership, long authorized by the constitution and by-laws, to a much larger group of interested persons than heretofore. Previously this class of membership had been limited chiefly to institutions that desired to subscribe to the Academy's publications. It has been decided to include in this category individual subscribers to *Pacific Discovery*.

EDUCATIONAL ACTIVITIES

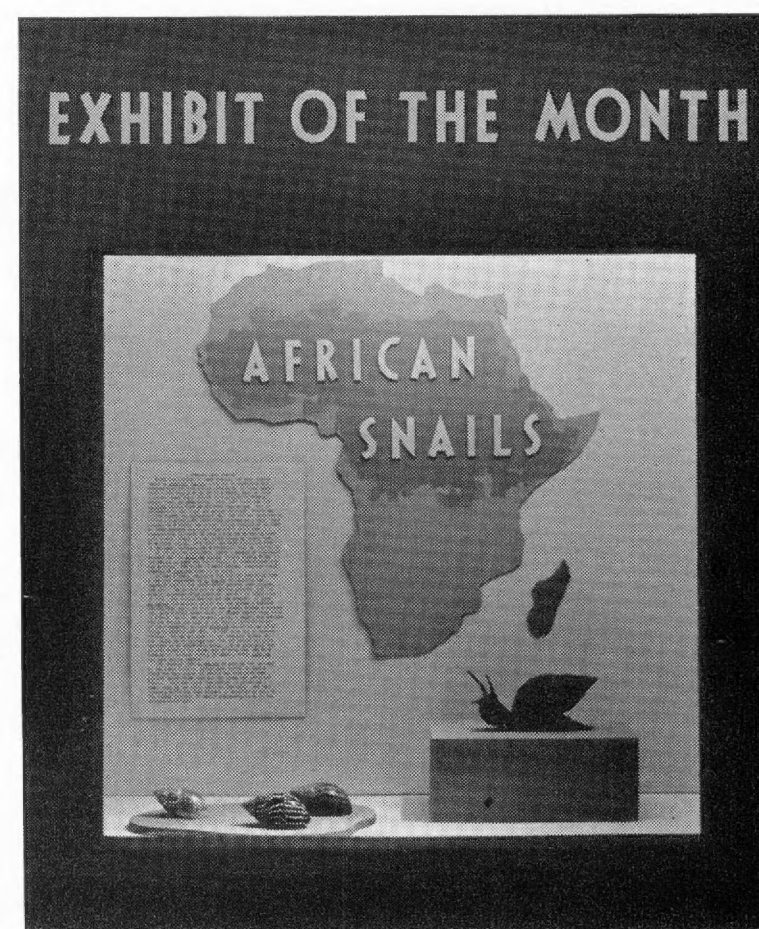
EXHIBITS

The Academy has continued its program of changing exhibits to supplement the permanent exhibits which attract so much attention and admiration. The changing exhibits are intended to give the visitor something new each time he comes. Twenty-five such temporary exhibits were displayed during the year.

Further, in November of 1961 the Department of Exhibits inaugurated an "Exhibit of the Month," which features unusual exhibits for which no permanent display space is available. These have been well received and much admired. These have included "Dinosaur Gizzard Stones" from the collection of Dr. A. W. Ward, "Pre-Columbian Artifacts from Central and South America" from the collections of Mr. James M. Saunders and Dr. Francis Scott Smyth, a "Black Coral Tree" from Mr. L. R. Fletcher, and various exhibits from the Academy's collections.

In addition, installation of the permanent exhibits in the Alice Eastwood Hall of Botany was continued, with funds received from the May Treat Morrison Trust Estate, through Mr. Edward Hohfeld, executor of the estate. Thirteen new cases were installed. An unusually beautiful hand-made bench, produced through weeks of work by the Academy's cabinetmaker, Mr. Franklyn T.

Left, one of the new exhibits in Botany Hall; right, an Exhibit of the Month.



Kreighbaum, was also placed in the Eastwood Hall, through a generous gift of Mrs. Leslie Armstrong. Mrs. Armstrong believes that people should be comfortable as they contemplate the exhibits.

Most recent of the permanent exhibits is a case of African birds, provided by Trustee Brooks Walker, his brother-in-law and sister, Mr. and Mrs. Wellington Henderson, and Mr. John L. Bradley.

The Department has also engaged in museum extension work, preparing an exhibit featuring the Academy's work in the Galapagos which was sent to the Tenth Pacific Science Congress in Honolulu, an exhibit for the San Francisco meetings of the American Association of Petroleum Geologists and Society of Economic Paleontologists and Mineralogists, an exhibit for the Berkeley meeting of the International Astronomical Union, and an exhibit entitled "Our American Heritage" which was displayed at the Atherton Garden Fair and elsewhere in the Bay Region. Various exhibits were also prepared for use of the Academy's television program, "Science in Action."

The Curator of the Department of Exhibits has overall charge of the Student Section of the Academy, serves on call as a lecturer in the Morrison Planetarium, is a member of the board of the Bay Area Science Fair, and a member of the Advisory Committee of the Josephine Randall Junior



Museum. All of these functions are related to the basic educational role of the Department of Exhibits.

STUDENT SECTION

The Student Section has continued to flourish under the supervision of Mr. David Elvin, assisted by Mr. Urbain Kinet. The program has recently been divided into Junior and Senior divisions so that younger students may gain the advantages that have formerly been available only to high school and junior high school students. Numerous field trips have been held, and publication of the mimeographed journal "Student Discovery" has been continued at a high level.

It is worthy of note that David Elvin, supervisor of the Student Section, is himself a former member of this section. This is the first time in its history that the Student Section has been in charge of a person who may be termed one of its own "graduates."

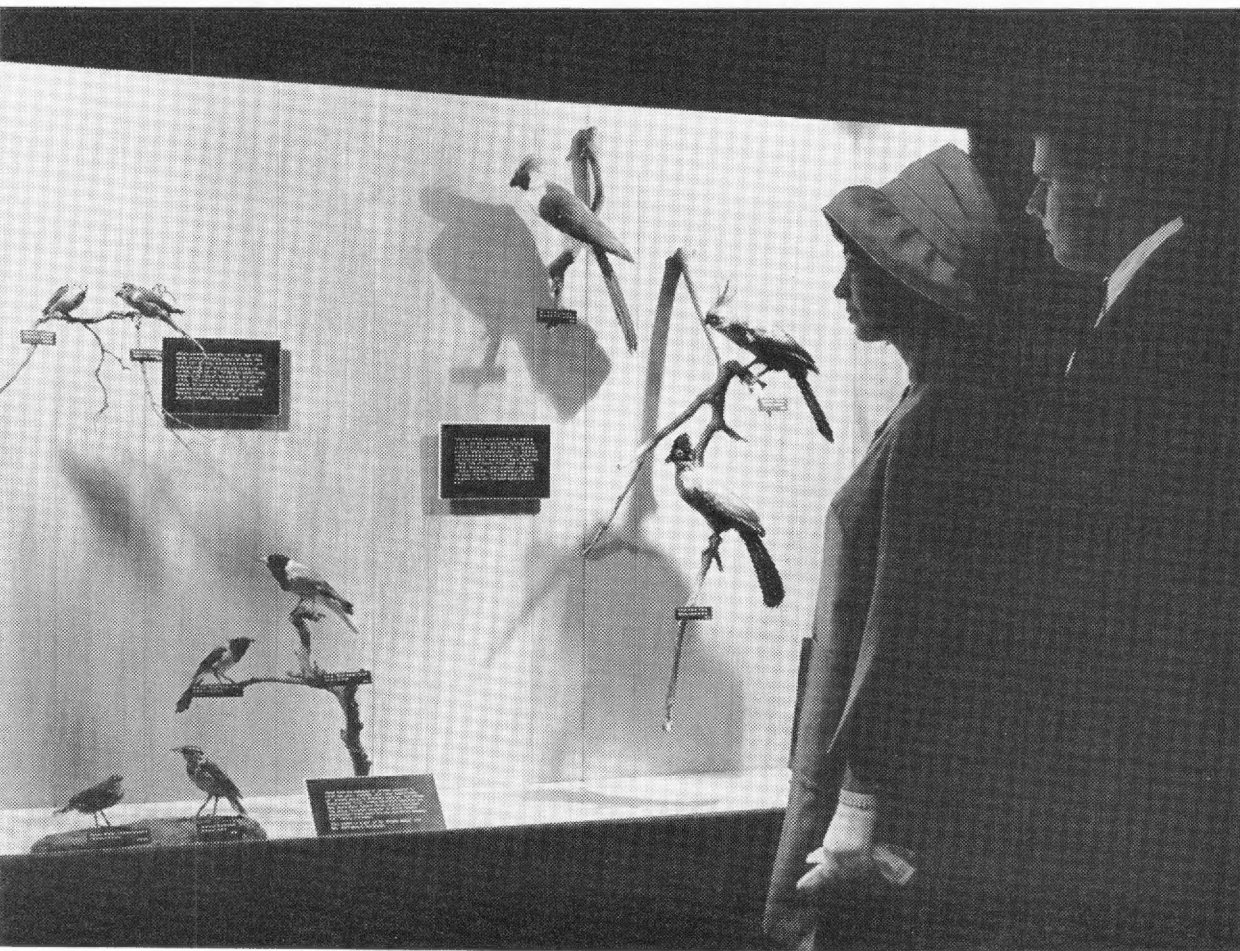
Membership in the Student Section currently numbers 118, which is close to the maximum number that can be accommodated with present facilities and personnel. Expansion of this invaluable program should make a profound appeal to persons whose philanthropic interests are directed toward the development of the scientific activities and talents of our young people.

PLANETARIUM

Attendance at the Morrison Planetarium increased over the previous year, notwithstanding the fact that the Planetarium was closed for more than a week in early January for maintenance. The statistics are as follows:

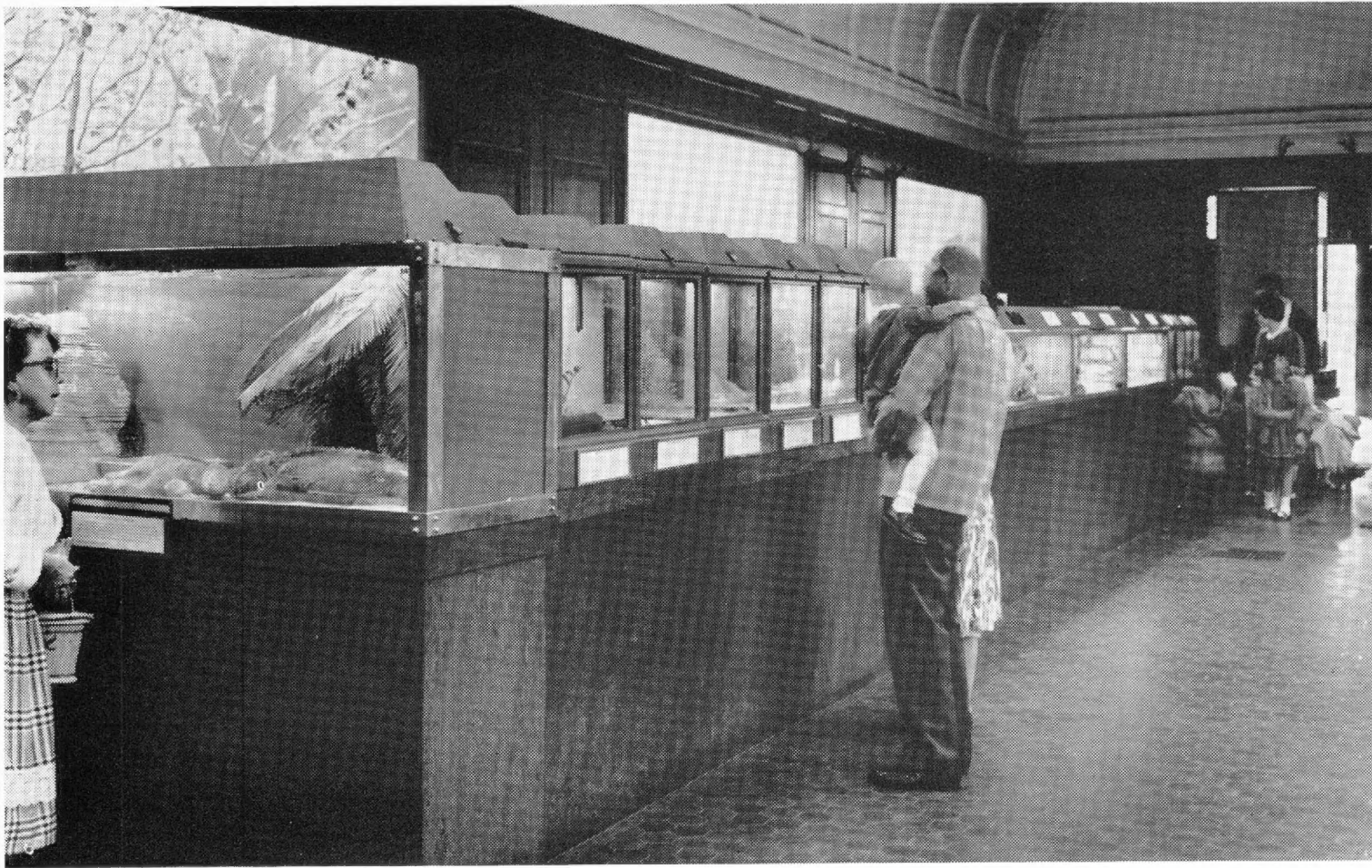
No. of Shows	Type of Show	Attendance		Total
		Adults	Children	
773	Regular	69,480	38,607	108,087
153	Student		45,373	45,373
926				153,460

A total of 993 programs were given during the year, including—in addition to the regular Planetarium programs—thirteen sessions each of a course in Popular Astronomy, a course in Advanced Astronomy, and a course in Celestial



Two new installations: above, a case of African birds in Simson African Hall; below, information desk in North American Hall.





When Steinhart Aquarium was closed for rehabilitation (far left), the smaller reptiles were moved to a temporary home in North American Hall, where they can still be viewed by visitors (left). Meanwhile, reconstruction of the Aquarium is proceeding both on the facade of the building (below), and within, where new fish tanks are being readied (bottom of page).

Navigation; sixteen sessions of a course in Meteorology; and twelve sessions of a course in Space Science.

More than 1,000 written requests for general information and 2,000 letters regarding student programs were handled, and many hundreds of telephone requests for information were answered. Numerous talks on astronomy were given to outside organizations, and members of the staff participated in nine radio and television interviews. Public interest in the Planetarium remains unabated.

TELEVISION

The Academy's widely-acclaimed television program, "Science in Action," completed its twelfth year on the air. Originally sponsored by American Trust Company, sponsorship has been continued by Wells Fargo Bank following amalgamation of those two organizations. To the best of our knowledge "Science in Action" is the oldest television program on the air with unbroken sponsorship by the original sponsor.

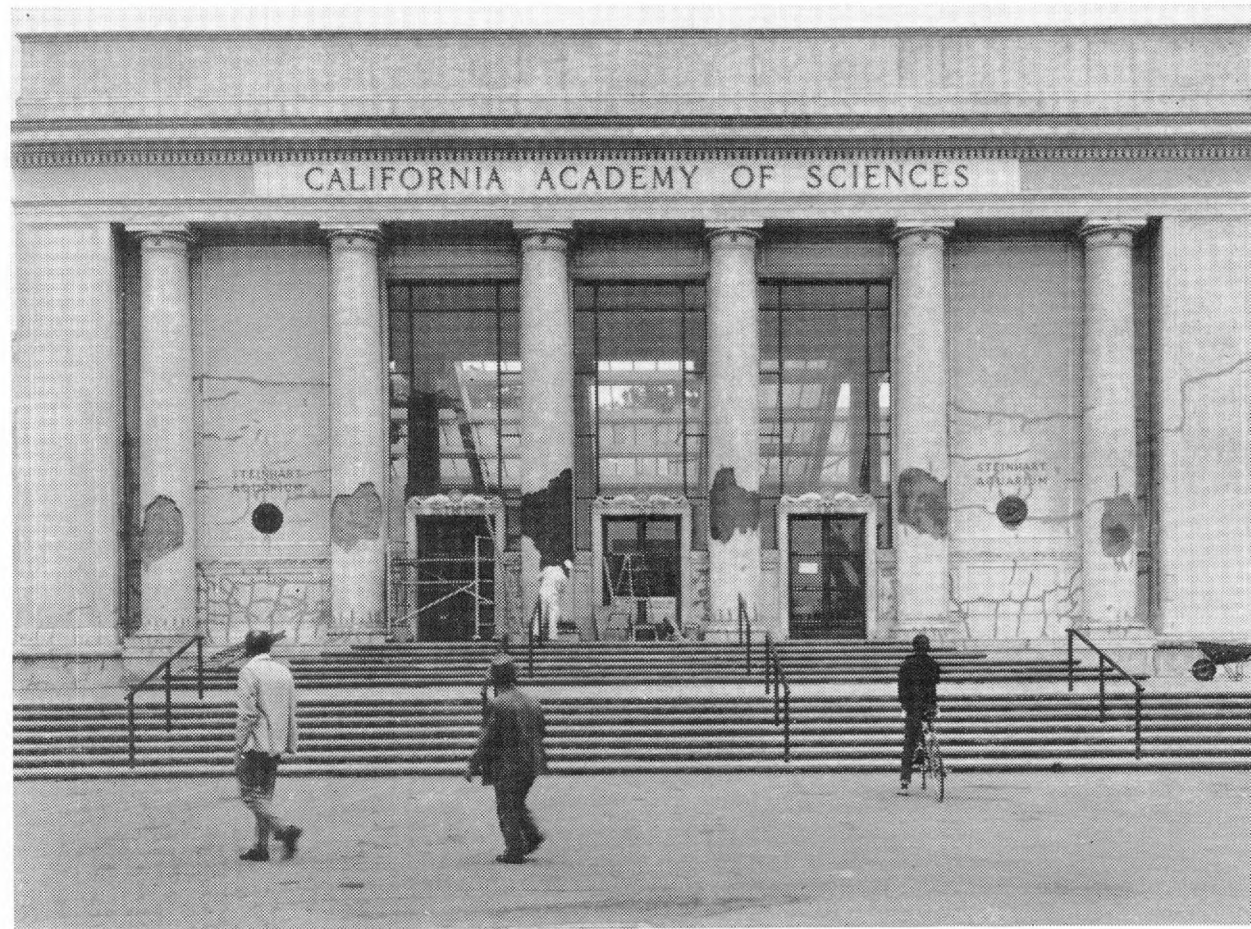
The program is now on the air, with additional sponsors, in a chain of cities from Johnstown, Pa., to Hong Kong, and is also available to our armed forces overseas. Dr. Earl S. Herald continues as program host, and Benjamin Draper as executive producer.

DEPARTMENTAL ACTIVITIES

Aquatic Biology

The main physical facility of this department, the Steinhart Aquarium, is undergoing extensive repair and reconstruction under a bond issue of \$1,575,000 voted by the citizens of San Francisco. The Aquarium had to be closed to the public on March 18 to permit the contractor to work in the public spaces. The Aquarium staff has led a somewhat hectic life, moving their offices and laboratories from one place to another as the work progressed.

The major part of the highly valuable collection of living fishes has been maintained, under considerable difficulties. Few people realize that, if the fishes in the Steinhart Aquarium were lost, it would require many years of effort



to replace them. The work of the staff in moving these fishes from tank to tank as the work of renewal of the aquarium has progressed deserves great commendation.

The staff participated as usual in the annual shark derby, obtaining data on the number and distribution of sharks in San Francisco Bay. This is a long-term project which, in the course of years, will result in valuable information.

Curator Earl S. Herald's book, *Living Fishes of the World*, published last year, has been issued in four foreign-language editions—Danish, Dutch, German, and Spanish.

Botany

This might be called "the Lassen year" of the Botany Department. The field and herbarium studies on the flora of the Lassen Peak region, carried on over a period of years, were published in July, 1961, as "A Flora of Lassen Volcanic National Park, California," under the joint authorship of George W. Gillett, John Thomas Howell, and Hans Leschke. This was supplemented, for non-technical persons, by a popular book entitled "Flowers of Lassen" by Mrs. Gladys L. Smith, technical assistant in the Botany Department.

Dr. Elizabeth McClintock, Associate Curator, in collaboration with Dr. Mildred Mathias of the University of California at Los Angeles, completed a list of the woody ornamental plants handled in the nursery trade in California, a project undertaken at the request of the State Department of Agriculture. Dr. McClintock represented the Botany Department at the Tenth Pacific Science Congress held in Honolulu in August, 1961.

Research Associate Lewis S. Rose continued to give a generous amount of his time to the Department, handling all of the exchanges of plants with other institutions, and assisting in bibliographic and curatorial work.

Accessions of botanical specimens during the year totaled 14,406. The number of mounted specimens in the herbarium is now 433,319.

Entomology

The collection of insects is a pursuit of wide appeal, and even the casual observer is likely to find specimens from time to time that arouse his curiosity. A consequence is that insects are continually being brought or sent in to the Academy for identification—and subsequent curation. The latter involves mounting, labeling, and taking care of the material for future study. Curation also involves sending quantities of material to specialists at other institutions for study and report, either at their own request, or because the information is needed at the Academy. 62,696 specimens were sent out on loan during the past year.

Associate Curator Hugh B. Leech has been acting head of the Department during the absence of Dr. E. S. Ross on extended field work abroad. Associate Curator Edward L. Kessel has spent many weeks in the field collecting Platypezidae on the Pacific Slope, including British Columbia and Alaska. Dr. C. Don MacNeill has continued his work on Hesperiididae while assisting in administrative and curatorial work.

Great progress has been made in the adequate housing and arrangement of the entomological collections, under a grant from the National Science Foundation. Quantities of unmounted specimens have been mounted and labeled, and thus made available for study.

While curating is a necessary and somewhat routine procedure, there are also glamorous aspects to the pursuit of

Entomology. The Curator of the Department, Dr. E. S. Ross, with his wife and son Clark, and an assistant, David Cavagnaro, has spent the past year collecting in southeast Asia, and at the end of the year the party was en route to Australia. Although field work may seem more interesting and exciting than work in the laboratory, actually field expeditions work from dawn to dark, often under difficult and uncomfortable conditions; and after the expedition is over, there is still the laboratory work to do. But in or out of the laboratory there is the reward of continued discovery.

Geology

Curator G Dallas Hanna continued analysis of his field work on geological features of the Arctic slope of Alaska and completed a revision of his earlier publication, now out of print, on the genus *Conus*. He printed the colored plates for this by the Eastman short-run process, which he has developed to a high degree of perfection.

Associate Curator Leo G. Hertlein was, at the end of the fiscal year, promoted to Curator of Invertebrate Paleontology by action of the Academy's Science Council. Both Dr. Hanna and Dr. Hertlein received National Science Foundation grants in support of their research.

The Department was saddened by the deaths during the year of Mrs. Myrtle Kuhlmeier, departmental assistant for the past twenty-eight years, and of Don L. Miller, geologist with the U. S. Geological Survey, who made his headquarters at the Academy when not in the field.

Herpetology

Associate Curator Alan E. Leviton, with Dr. Lawrence Swan, Research Associate, completed and published a study of *The Herpetology of Nepal*. Dr. Leviton continued his work on Philippine snakes, and initiated a series of studies on taxonomic implications of serum and hemoglobin protein differences in amphibians, supported by a grant from the National Science Foundation. Dr. Benjamin W. Grunbaum of the University of California Medical Center assisted in an advisory capacity in this study.

Dr. Benjamin H. Banta continued to be employed under a grant from the National Science Foundation. His efforts have been most fruitful, with the result that the Western North American collections are in excellent order. Under grants from the American Philosophical Society, Drs.



As part of a study of the spinetailed swifts, the Department of Ornithology has been studying the species known to science. The swift was taken from the nest when only four days old. It is now being cared for by Mrs. Jacqueline Schonewald, left. Right, the white-naped swift.

Leviton and Banta visited a number of eastern museums in June and July of 1961, in connection with various taxonomic problems.

During the fiscal year the department received 1,046 specimens of amphibians and reptiles. The total collection is now estimated to exceed 100,000 specimens.

Ichthyology

During the fiscal year 1961-62, Curator W. I. Follett conducted or participated in nineteen field trips, principally in California, Arizona, and Nevada. Through collecting by the Curator and specimens brought in by others, about 1,000 specimens were added to the fish collection.

Lillian J. Dempster was promoted from Assistant Curator to Associate Curator on July 1, 1961. She represented the Department at the Tenth Pacific Science Congress in Honolulu in August, 1961. Professor Carl L. Hubbs of the Scripps Institution of Oceanography was appointed Research Associate in the Department on March 15, 1962.

Invertebrate Zoology

This Department continues to grow, with specimens being brought in by SCUBA divers, and deep water material from commercial trawlers and from the California Department of Fish and Game. Much of the curatorial work consists of cataloging and arranging a large backlog of preserved invertebrates accumulated in past years.

Associate Curator Allyn G. Smith visited the Academy of Natural Sciences of Philadelphia and the British Museum (Natural History) in June, 1962. He is currently identifying a large collection of invertebrate material from Amchitka Island for the U. S. Fish and Wildlife Service, in connection with studies of the food of sea otters.

Ornithology and Mammalogy

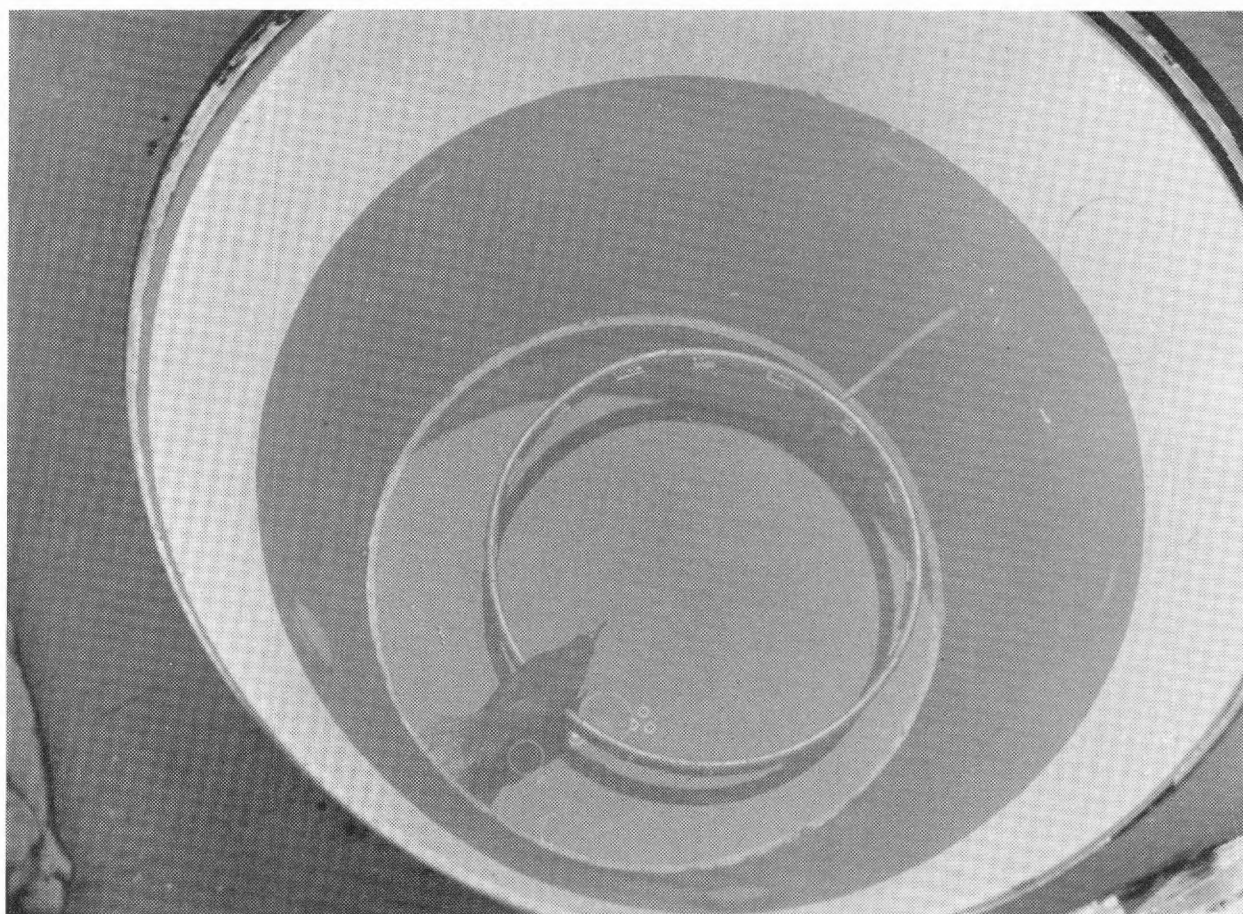
Curator Robert T. Orr continued research begun the previous year on a study of seals, sea lions, and elephant seals of Año Nuevo Island, in cooperation with Dr. Thomas C. Poulter of Stanford Research Institute; and a study of the spinetailed swifts (subfamily Chaeturinae), in conjunction with Mr. J. Stuart Rowley, supported by the Academy and the American Museum of Natural History. Mr. Rowley carried on field work in Mexico important to the latter project.



Ornithology and Mammalogy is raising the first young white-naped swift days old; detailed notes on its development are being kept as it is raised at the age of four months.



Above, Dr. and Mrs. Hamilton with the truck containing the equipment used in the studies of celestial navigation by birds. Below, looking down at the apparatus mounted in the top of the truck. The bird's reactions to celestial stimuli are photographed at night by infrared light.



Dr. William J. Hamilton III continued his studies on celestial navigation by birds begun in 1960 and supported by the Air Force Office of Scientific Research. He was assisted by Dr. Franz Sauer for a year, ending in February, 1962, when Dr. Sauer left to take a permanent position at the University of Florida.

Dr. Richard C. Banks worked on a project on the birds of Cerralvo Island under a National Science Foundation grant. In February, 1962, he accepted a position at the San Diego Natural History Museum, but completed the Cerralvo Island project under Academy auspices.

Drs. Orr, Hamilton, and Banks all participated in the XIII International Ornithological Congress held at Cornell University, June 17-22, 1962.

Research Associate Dorcas MacClintock contributed valuable services to the Department during the year.

Library

A good library is basic to any institution of research or higher learning. It is the department on which all of the scientific departments depend.

The J. W. Mailliard, Jr., Memorial Library provides a handsome and spacious facility for the scientific staff and visiting scientists, as well as excellent working quarters for the library staff itself. The recently completed Lucie Stern Room provides a place for the safe keeping of Academy archives and other important memorabilia.

Valuable additions to the Library were made in the past year by gifts, exchange, and purchase. The Academy maintains exchange relations with about 1,000 other institutions—universities and learned societies throughout the world. This keeps us current with their publications, and them with ours.

Substantial progress has been made in bringing together a research library on Baja California. This undertaking is being financed by the Belvedere Scientific Fund, which has provided a Baja California Library Fund to supplement the extensive scientific investigations currently being carried on in that area.

Increasing use of the Library is being made by research workers and by professors and students from neighboring universities, as it constitutes the only library of its type in the San Francisco area.

Research Grants and Contracts

The Belvedere Scientific Fund has continued to support a program of research in Baja California under Academy auspices. Extensive collecting was done in 1961-62 by Dr. and Mrs. Ira L. Wiggins and Dr. John Thomas of Stanford University, and by Miss Annetta Carter of the University of California, and others. There were six separate expeditions during the year. Major emphasis has been on botany, with a view to obtaining a well-organized and comprehensive knowledge of the flora of the rugged peninsula. Other groups of organisms are collected as opportunity permits.

The Academy's research program in various fields is also being supported by various public and private agencies through research grants or contracts. In theory a contract is more restrictive than a grant, but in fact there is little difference, since a research grant is essentially a contract to carry on the research for which the grant was requested. Both contribute to expansion and vitality of the Academy's research program. The following tabulation indicates the scope of such support:

<i>Granting or Contracting Agency</i>	<i>Department or Field</i>	<i>Number of Active Grants or Contracts in 1961-62</i>
Air Force Office of Scientific Research	Ornithology	1
California State Marine Research Committee	Fisheries	
American Philosophical Society	Biology	2
National Geographic Society	Herpetology	2
National Science Foundation	Entomology	1
National Science Foundation	Botany	1
National Science Foundation	Entomology	3
National Science Foundation	Geology	2
National Science Foundation	Herpetology	2
National Science Foundation	Ornithology	1
Society of the Sigma Xi	Herpetology	1
U. S. Fish and Wildlife Service	Fisheries	
	Biology	1
Total		17

Publications

Four *Occasional Papers* and eleven numbers of the *Proceedings of the California Academy of Sciences* were issued during the fiscal year. These totaled 356 pages, about equally divided among papers written by members of the Academy's staff and papers written by specialists from other institutions, mostly on material in the Academy's collections. Staff publications elsewhere than in the Academy's *Proceedings* and *Occasional Papers* have numbered some 70 titles totaling about 375 pages.

Volunteer Assistance

In addition to the services freely rendered to the Academy year after year by its Honorary Curators, Research Associates, and Field Associates, valued assistance is also given by volunteer workers in various departments.

Mrs. Walter H. Buchen has assisted our Public Information office by keeping our newspaper clipping files in order and up-to-date, a service she has rendered for nearly three years. Miss Susan Turnbull and Mr. Ken Klassen worked diligently during the summer organizing reference files of photographs, kodachrome slides, and other pictorial material.

Mrs. Mary Jo Duncan and Miss Betty Toles rendered volunteer assistance, often amounting to several afternoons a week, doing curatorial work in the Department of Invertebrate Zoology under the supervision of the Associate Curator. Both of these young women are experienced students of marine zoology, whose interest and competence have been most helpful.

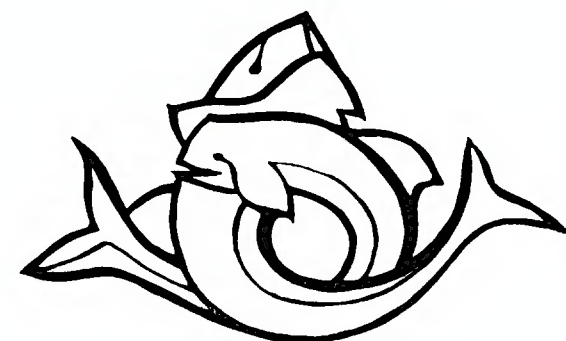
The Botany Department is grateful for extremely helpful assistance from Mrs. Brita Boeckel, Mrs. A. F. Fick, Mrs. E. O. Kelsey, Mrs. Max Kruse, Miss Marjorie Hart, Dr. Hans Leschke, Mr. Peter Rubtsoff, and Mr. Javier Penalosa.

Following the lamented death of Dr. William Barclay Stephens on February 28, 1962, Mr. Bruce Kock was nominated by the San Francisco Chapter of the American Clock and Watch Association to assist in the proper maintenance and care of the famed Stephens Collection of time-keeping devices. Mr. Kock has volunteered his services regularly on Tuesday afternoons for this purpose, and also to give information on clocks and watches to people desiring it. His work is greatly appreciated.

Mrs. James I. Campbell has volunteered her services to the Library two afternoons a week throughout the past year. She has been working on arrangement of the letters and other personal papers of the late Miss Alice Eastwood, Dr. Gustav Eisen, and Mr. G. P. Rixford in the Academy's archives. Mr. Anson Herrick, who makes an avocation of fine bookbinding, has bound 36 volumes, 16 of them in full Morocco, and has restored ten other rare old volumes.

To all of these volunteer workers are due the thanks of the Director and staff—and indeed the entire Academy.

ROBERT C. MILLER
Director



CALIFORNIA ACADEMY OF SCIENCES

BALANCE SHEET, JUNE 30, 1962

ASSETS		LIABILITIES AND FUNDS BALANCES	
CURRENT FUNDS			
Cash	\$ 68,148.29	Accrued Interest on Note Payable	\$ 2,683.33
Receivables—Principally City and County of San Francisco	24,898.87	Funds Balances:	
Books and Postcards—At cost (held for sale)	9,387.46	Restricted	\$ 70,007.51
Deferred Charges (other than item shown below)	5,876.83	General	50,855.11
Unamortized Lease Cost Applicable to Rental Property (lease expires 1984)	15,234.50	Total	<u>120,862.62</u>
Total	<u>\$ 123,545.95</u>	Total	<u>\$ 123,545.95</u>
ENDOWMENT AND OTHER NONCURRENT FUNDS			
Cash	\$ 182,926.82	Funds Balances:	
Security Investments—At cost (quoted market value, \$327,438.76)	305,915.47	Endowment and functioning as endowment	\$ 795,331.87
Rental Property (less accumulated depreciation, \$514,270.71)—Deed of Trust pledged as collateral to note payable	610,631.60	Other noncurrent funds	324,642.02
Real Estate (under sales option)	20,500.00	Total	<u>\$1,119,973.89</u>
Total	<u>\$1,119,973.89</u>		
PLANT FUNDS			
Cash	\$ 23,020.09	Note Payable to Insurance Company, 5¾%—Due October 11, 1964 (see Rental Property)	\$ 210,000.00
Marketable Securities—At cost (market value, \$13,254.75)	12,394.29	Funds Balances:	
Collections, Library, and Equipment—At cost to the Academy (Note 1)	<u>922,528.09</u>	Unexpended plant	\$ 35,414.38
Total	<u>\$ 957,942.47</u>	Net invested in plant	712,528.09
		Total	<u>747,942.47</u>
		Total	<u>\$ 957,942.47</u>

The accompanying notes to financial statements are an integral part of this statement.

ACCOUNTANTS' OPINION

California Academy of Sciences:

We have examined the balance sheet of the California Academy of Sciences as of June 30, 1962 and the related statement of current expenditures and income and statement of changes in funds balances for the year then ended. Our examination was made in accordance with generally accepted auditing standards, and accordingly included such tests of the accounting records and such other auditing procedures as we considered necessary in the circumstances, except that it was not practicable to extend the examination of contributions beyond accounting for the receipts as recorded.

In our opinion, based on our examination, the accompanying financial statements present fairly the financial position of the Academy at June 30, 1962 and the results of its operations for the year then ended, in conformity with generally accepted accounting principles applied (except for the changes explained in note 2 to the financial statements) on a basis consistent with that of the preceding year.

HASKINS & SELLS

August 31, 1962

CALIFORNIA ACADEMY OF SCIENCES

STATEMENT OF CURRENT EXPENDITURES AND INCOME FOR THE YEAR ENDED JUNE 30, 1962

	<i>Total</i>	<i>General</i>	<i>Restricted</i>
EXPENDITURES:			
Scientific and public service departments (curatorial, research, and educational):			
Aquatic biology (and Steinhart Aquarium)	\$217,903.20	\$184,241.89	\$ 33,661.31
Astronomy (Morrison Planetarium)	72,835.80	72,835.80	
Botany	22,259.93	22,259.93	
Entomology	60,780.65	20,523.02	40,257.63
Geology	26,095.46	19,384.27	6,711.19
Herpetology	21,395.40	8,702.52	12,692.88
Ichthyology	7,626.00	7,626.00	
Invertebrate zoology	1,836.90	1,836.90	
Ornithology and mammalogy	18,183.47	12,984.79	5,198.68
Special scientific research expeditions	32,559.76		32,559.76
Scientific publications	10,964.43	8,897.09	2,067.34
Other publications	58,092.37	58,092.37	
Student services	5,097.19	5,097.19	
Library	23,997.59	23,997.59	
Exhibits and collections	29,749.94	29,749.94	
Television	161,642.37	161,642.37	
Operation and maintenance of physical plant (principally museum)	121,374.66	121,374.66	
Auxiliary enterprises	6,051.33	6,051.33	
Administrative and general	39,830.79	39,830.79	
Interest	12,075.00	12,075.00	
Other expenditures	1,040.52		1,040.52
Total	<u>951,392.76</u>	<u>817,203.45</u>	<u>134,189.31</u>
INCOME:			
Membership dues	33,176.25	33,176.25	
City and County of San Francisco:			
Steinhart Aquarium	184,241.89	184,241.89	
Museum activities	105,587.99	105,587.99	
Endowment income (rental property)	98,683.36	98,683.36	
Grants (\$111,855.64) and gifts	126,010.20		126,010.20
Sales and services related to scientific and public service departments (Morrison Planetarium, sale of publications, Pacific Discovery, etc.)	139,926.87	139,926.87	
Organized activities related to scientific and public service departments (television income, etc.)	173,425.02	173,425.02	
Auxiliary enterprises	20,358.43	20,358.43	
Other sources	27,402.85	26,709.69	693.16
Total	<u>908,812.86</u>	<u>782,109.50</u>	<u>126,703.36</u>
EXCESS OF EXPENDITURES OVER INCOME BEFORE APPROPRIATIONS	42,579.90	35,093.95	7,485.95
APPROPRIATIONS FROM ENDOWMENT AND OTHER NONCURRENT FUNDS	<u>11,283.65</u>	<u>11,283.65</u>	
EXCESS OF EXPENDITURES OVER INCOME AFTER APPROPRIATIONS	<u>\$ 31,296.25</u>	<u>\$ 23,810.30</u>	<u>\$ 7,485.95</u>

The accompanying notes to financial statements are an integral part of this statement.

CALIFORNIA ACADEMY OF SCIENCES
STATEMENT OF CHANGES IN FUNDS BALANCES
FOR THE YEAR ENDED JUNE 30, 1962

CURRENT FUNDS

	<i>Total</i>	<i>General</i>	<i>Restricted</i>
Balances, June 30, 1961	\$ 50,855.11	\$ 50,855.11	
Transfers from other noncurrent funds (Note 2)	73,789.10		\$ 73,789.10
Balances, July 1, 1961	124,644.21	50,855.11	73,789.10
Additions—Transfers from other noncurrent funds	27,514.66	23,810.30	3,704.36
Total	152,158.87	74,665.41	77,493.46
Deductions—Excess of expenditures over income	31,296.25	23,810.30	7,485.95
Balances, June 30, 1962	<u>\$ 120,862.62</u>	<u>\$ 50,855.11</u>	<u>\$ 70,007.51</u>

ENDOWMENT AND OTHER NONCURRENT FUNDS

	<i>Total</i>	<i>Endowment and Functioning as Endowment</i>	<i>Other Noncurrent</i>
Balances, June 30, 1961	\$ 390,561.67		\$390,561.67
Transfers from plant funds—Net (Note 2)	769,014.99	\$786,657.73	(17,642.74)
Transfers to current funds (Note 2)	(73,789.10)		(73,789.10)
Balances, July 1, 1961	1,085,787.56	786,657.73	299,129.83
Additions:			
Gifts	71,074.74	8,233.78	62,840.96
Income from investments	14,177.45	5,940.36	8,237.09
Other	3,407.87		3,407.87
Total	1,174,447.62	800,831.87	373,615.75
Deductions:			
Transfers to current funds	27,514.66		27,514.66
Appropriations to current funds	11,283.65	5,500.00	5,783.65
Expenditures for special purposes	15,675.42		15,675.42
Total	54,473.73	5,500.00	48,973.73
Balances, June 30, 1962	<u>\$1,119,973.89</u>	<u>\$795,331.87</u>	<u>\$324,642.02</u>

PLANT FUNDS

	<i>Total</i>	<i>Unexpended Plant</i>	<i>Net Invested in Plant</i>
Balances, June 30, 1961	\$1,523,931.25	\$ 18,739.80	\$1,505,191.45
Transfers to Endowment and other noncurrent funds—Net (Note 2)	(769,014.99)	17,642.74	(786,657.73)
Balances, July 1, 1961	754,916.26	36,382.54	718,533.72
Additions:			
Expenditures for plant additions		(2,289.80)	2,289.80
Plant additions financed from other funds	5,769.99		5,769.99
Gifts	900.00	900.00	
Income from investments	1,052.37	1,052.37	
Total	762,638.62	36,045.11	726,593.51
Deductions:			
Expenditures for additions to buildings not shown as asset as title to which is vested in the City and County of San Francisco	13,155.30		13,155.30
Removal of noncapital items	910.12		910.12
Other	630.73	630.73	
Total	14,696.15	630.73	14,065.42
Balances, June 30, 1962	<u>\$ 747,942.47</u>	<u>\$ 35,414.38</u>	<u>\$712,528.09</u>

The accompanying notes to financial statements are an integral part of this statement.

NOTES TO FINANCIAL STATEMENTS
FOR THE YEAR ENDED JUNE 30, 1962

1. Buildings located in Golden Gate Park carried at \$2,354,361.74 are not included in plant funds as title to the buildings is vested in the City and County of San Francisco.
2. The Academy is currently in the process of making extensive revisions in its account structure, and accordingly, in its financial statements, particularly with respect to classifica-

tions of funds balances and changes in such balances, including changes arising from current expenditures and income. To the extent practicable at this time, these revisions have been made effective as of July 1, 1961. It is expected that additional revisions will be adopted during the year ending June 30, 1963.

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* Deceased February 28, 1962